

**METHOD FOR FABRICATING  
ENCLOSED MICROCHANNEL STRUCTURES**

**ABSTRACT**

Methods are provided for the fabrication of polymeric microchannel structures having enclosed microchannels of capillary dimension. The microchannel structures are constructed of a base plate and a cover, sealed together. Microchannel structures having walls of a plastic material are formed in a generally planar surface of at least the base plate. The cover has at least one generally planar surface, and the microchannel structures are enclosed by bonding the planar surfaces of the cover and the base plate together. In some embodiments the surfaces of the cover and base plate are both of plastic material, and are directly thermally bonded. In some embodiments a bonding material is applied to one of the surface prior to bringing the surfaces together. Suitable bonding materials are disclosed.

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